

REMARKS:Status

After this response, claims 1, 4 to 9, 11 to 14, 17 to 21, 23 to 25, 28 to 31, and 33 to 35 are pending. Claims 1, 4, 6, 7, 9, 11 to 14, 17, 19 to 21, 23 to 25, 28, 30, 31, 33 and 34 have been amended. Claims 2, 3, 10, 15, 16, 22, 26, 27 and 32 have been cancelled. Claims 1, 9, 14, 21, 25, 31 and 35 are the independent claims. Reconsideration and further examination are respectfully requested.

Claim Rejection

Claims 1 to 35 were rejected under 35 U.S.C. § 102(e) in view of U.S. Patent Pub. No. 2001/0044807A1 (Kleiman). Applicant notes that Kleiman has now issued as U.S. Patent No. 6,604,118. Applicant also notes that Kleiman and the current application share a common assignee, Network Appliance, Inc.

Response to Rejection

Claims 1, 4 to 8, and 11 to 13: Claim 1 is the independent one of these claims and has been amended to read as follows:

1. A method of propagating data, comprising:
mirroring the data from a first filer to a second filer; and
mirroring the data from the second filer to a third filer;
wherein snapshots are used in mirroring the data, the data is
organized in one or more volumes on the filers, one or more of the

volumes are mirrored, and the first filer uses softlocks to mark snapshots needed for mirroring volumes from the first filer.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 1, at least with respect to “the first filer [using] softlocks to mark snapshots needed for mirroring volumes from the first filer.”

A feature along these lines was recited by original claim 3. The Office Action rejected that claim, citing paragraphs [0008] and [0219] of Kleiman. The Office Action noted that the “Examiner interprets the softlock [as] an indicator.”

Kleiman’s indicator does not appear to Applicant to be used in the same manner as the softlock recited by claim 1.

In more detail, paragraph [0219] of Kleiman states that “[t]he destination file system 120 sends an indicator of its newest master snapshot 210 to the file server 110.” The file server 110 uses this indicator to determine if it has “at least one master snapshot 210 older than the master snapshot 210 indicated by the destination file system 120.” Kleiman, paragraphs [0221] and [0223]. Thus, Applicant submits that Kleiman’s indicator of the destination file system’s master snapshot is not used by the file server 110 “to mark snapshots needed for mirroring volumes,” as recited by claim 1. Rather, Kleiman’s file server 110 appears to Applicant to use the indicator to compare with its own existing master snapshot.

In this regard, Applicant respectfully notes that anticipation under 35 U.S.C. § 102(e) requires that “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920

(Fed. Cir. 1989) (cited in MPEP § 2131). Kleiman is not seen by Applicant to meet this threshold.

In view of the foregoing, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 1 and its dependent claims 4 to 8 and 11 to 13, as is allowance of those claims.

Claim 9: Amended independent claim 9 reads as follows:

9. A method of propagating data, comprising:
mirroring the data from a first filer to a second filer; and
mirroring the data from the second filer to a third filer;
wherein snapshots are used in mirroring the data, the data is
organized in one or more volumes on the filers, and one or more of the
volumes are mirrored; and
wherein jump ahead protection is used during mirroring operations,
said jump ahead protection preventing activation of a snapshot of a
volume while mirroring the volume to another filer.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 9, at least with respect to “[using] jump ahead protection ... during mirroring operations, said jump ahead protection preventing activation of a snapshot of a volume while mirroring the volume to another filer.”

A feature along these lines was recited by original claim 9. The Office Action rejected that claim, citing paragraph [0136] of Kleiman. The Office Action noted that the “Examiner interprets the method of transmitting images to the destination as jump ahead.”

However, as discussed at page 21, lines 10 to 17, et seq. of the present application, jump ahead also includes activation of the image. One possible example of such activation would be activation of a mirror of a file system for access by users after the image has been

transferred. Other examples and interpretations are possible and are within the scope of the invention.

Turning to the claim language, claim 9 does not recite “jump ahead” by itself. Rather, the claim recites “jump ahead protection.” Claim 9 has been amended to specifically recite that this protection prevents activation of a volume while mirroring to another filer. This feature goes well beyond the cited “method of transmitting images to the destination.”

Cited paragraph [0136] of Kleiman appears to Applicant to fall short of teaching prevention of activation of a volume while mirroring to another filer. Instead, the language of that paragraph discusses the unrelated features of “remov[ing] those indicated storage blocks from its incremental mirror data structure” so as to “maintain the incremental mirror data structure at a size no larger than approximately the actual differences between a current file system at the file server 110 and the base storage image 230 from the file server 110.” Applicant does not see any mention in this paragraph or in the rest of Kleiman of “jump ahead protection [that prevents] activation of a snapshot of a volume while mirroring the volume to another filer,” as recited by claim 9.

In view of the foregoing, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 9, as is allowance of that claim.

Claims 14, 17 to 20, 23 and 24: Claim 14 is the independent one of these claims and has been amended to read as follows:

14. A memory storing information including instructions, the instructions for propagating data, the instructions comprising mirroring the data from a first filer to a second filer for mirroring to a third filer;

wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, one or more of the volumes are mirrored, and the first filer uses softlocks to mark snapshots needed for mirroring volumes from the first filer.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 14, at least with respect to “the first filer [using] softlocks to mark snapshots needed for mirroring volumes from the first filer.” As discussed at length above, Kleiman’s teachings are not seen by Applicant to meet the threshold required for anticipating this feature under § 102(e). Accordingly, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 14 and its dependent claims 17 to 20, 23 and 24, as is allowance of those claims.

Claim 21: Amended independent claim 21 reads as follows:

21. A memory storing information including instructions, the instructions for propagating data, the instructions comprising mirroring the data from a first filer to a second filer for mirroring to a third filer;

wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, and one or more of the volumes are mirrored; and

wherein the instructions for mirroring further comprise instructions for jump ahead protection during mirroring operations, said jump ahead protection preventing activation of a snapshot of a volume while mirroring the volume to another filer.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 21, at least with respect to instructions for “jump ahead protection during mirroring operations, said jump ahead protection preventing activation of a snapshot of a volume while mirroring the volume to another filer.” As discussed above, neither paragraph [0136] nor the rest of Kleiman is seen by Applicant to disclose such a feature. Accordingly, reconsideration and

withdrawal are respectfully requested of the § 102(e) rejection of claim 21, as is allowance of that claim.

Claims 25, 28 to 30, 33 and 34: Claim 25 is the independent one of these claims and has been amended to read as follows:

25. A filer that mirrors data to one or more other filers, comprising:
a file system that stores the data;
a processor; and
a memory storing instructions for the processor, the instructions comprising mirroring the data from the filer to a second filer for mirroring to a third filer, wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, one or more of the volumes are mirrored, and the first filer uses softlocks to mark snapshots needed for mirroring volumes from the first filer.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 25, at least with respect to “the first filer [using] softlocks to mark snapshots needed for mirroring volumes from the first filer.” As discussed at length above, Kleiman’s teachings are not seen by Applicant to meet the threshold required for anticipating this feature under § 102(e). Accordingly, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 25 and its dependent claims 28 to 30, 33 and 34, as is allowance of those claims.

Claim 31: Amended independent claim 31 reads as follows:

31. A filer that mirrors data to one or more other filers, comprising:
a file system that stores the data;
a processor; and
a memory storing instructions for the processor, the instructions comprising mirroring the data from the filer to a second filer for mirroring to a third filer;

wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, and one or more of the volumes are mirrored; and

wherein the instructions for mirroring further comprise instructions for jump ahead protection during mirroring operations, said jump ahead protection preventing activation of a snapshot of a volume while mirroring the volume to another filer.

The applied reference is not seen by Applicant to disclose the foregoing features of claim 31, at least with respect to instructions for “jump ahead protection during mirroring operations, said jump ahead protection preventing activation of a snapshot of a volume while mirroring the volume to another filer.” As discussed above, neither paragraph [0136] nor the rest of Kleiman is seen by Applicant to disclose such a feature. Accordingly, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 31, as is allowance of that claim.

Claim 35: Original independent claim 35 reads as follows:

35. Data stored in a memory of a filer, the filer mirroring one or more volumes to a second filer for mirroring to a third filer, the data comprising one or more softlocks that indicate what volumes are mirrored to the second filer and the third filer, whereby deletion of snapshots associated with those volumes is prevented.

The applied reference is not seen to disclose the foregoing features of claim 35, at least with respect to data stored in a filer including “one or more softlocks that indicate what volumes are mirrored [from the filer] to the second filer and the third filer, whereby deletion of snapshots associated with those volumes is prevented.”

In the rejection of claim 35, the Office Action indicated that Kleiman teaches “wherein snapshots are used in mirroring the data.” Applicant agrees with this assessment of Kleiman.

However, claim 35 goes on to recite “one or more softlocks that indicate what volumes are mirrored [from the filer] to the second filer and the third filer.” The discussion of claim 35 in the Office Action does not directly address this softlock. After reviewing Kleiman, Applicant does not see any disclosure of a softlock or other indicator stored in a filer that indicates what volumes are mirrored from the filer to a second filer and a third filer.

Claim 35 also recites that “deletion of snapshots associated with those volumes [i.e., volumes indicated by softlocks] is prevented.” In this regard, footnote 2 on page 4 of the Office Action states that the “Examiner interprets the steps of saving copied data as preventing the deletion of that data.” While this is certainly a reasonable position, Applicant submits that it does not match the language recited by claim 35.

In more detail, claim 35 does not merely recite prevention of deletion of data. Rather, claim 35 recites that “deletion of snapshots ... is prevented.” The deletion of a snapshot, which may itself hold a copy of data, is prevented. Applicant submits that saving a copy of data, for example in a snapshot, is entirely different from preventing deletion of that snapshot. Kleiman is not seen by Applicant to disclose the later feature, namely prevention of deletion of a snapshot.

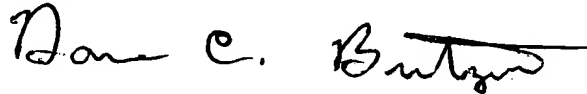
In view of the foregoing, reconsideration and withdrawal are respectfully requested of the § 102(e) rejection of claim 35, as is allowance of that claim.

Closing

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney can be reached at (614) 486-3585. All correspondence should continue to be directed to the address indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dane C. Butzer", written over a horizontal line.

Dane C. Butzer
Reg. No. 43,521

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The Swernofsky Law Group
P.O. Box 390013
Mountain View, CA 94039-0013
(650) 947-0700